

**REMARKS**

Claims 4-13 are pending in the application. By this Amendment, claims 4 and 7 have been amended. No new matter has been added. It is respectfully submitted that this Amendment is fully responsive to the Office Action dated January 29, 2008.

**As to the Merits:**

As to the merits of this case, the Examiner now relies on the Nagata reference under 35 U.S.C. §103(a) in setting forth the following rejections:

claims 4, 6, 7, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata** (US Patent No. 3,659,159);

claims 5, 8, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata** in view of **Moise et al.** (US Patent No. 6,008,917);

claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata** in view of **Cornely et al.** (US Patent No. 3,319,080);

claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata** in view of **Amano et al.**;

claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata** in view of **Moise et al.** and further in view of **Cornely et al.**; and

claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata** in view of **Moise et al.** and further in view of **Amano et al.**

Each of these rejections is respectfully traversed.

Independent claim 4, as amended, now calls for *at least one photodiode for converting an optical signal to an electrical signal; a resistor having its one end directly connected to an anode of this photodiode*. Independent claim 7 has been amended in a manner similar to independent claim 4.

With regard to independent claim 4, the Examiner asserts that **Nagata** clearly states in col. 3, lines 67-70 that the circuit of Fig. 4 operates in the same way as that of the circuit of Fig. 3 and that the operation of the photoelectric conversion element 42 is equivalent to that of the photodiode, since both elements perform converting light into electric current.

However, even if, assuming *arguendo*, that the photo-electric conversion element 42 can be replaced with the photodiode 35 of Fig. 3, it is respectfully submitted that such modification of the circuit of Fig. 4 would still not disclose or fairly suggest the features of claim 4 regarding a *resistor having its one end directly connected to an anode of the photodiode*.

That is, in Fig. 3, the anode of the photodiode 35 is connected to ground. Therefore, if the photodiode 35 were to replace the photoelectric conversion element 42 in Fig. 4, the anode of

the photodiode 35 would be connected to ground and the cathode of the photodiode 35 would be connected to one end of the resistor 49 when the switch 48 is closed.

Therefore, even if, the circuit of Fig. 4 of **Nagata** is modified by replacing the photoelectric conversion element 42 with the photodiode 35 of Fig. 3, such modification would still fail to disclose the feature of claim 4 regarding *a resistor having its one end directly connected to an anode of this photodiode*.

With regard to these features in claim 4, the Examiner asserts that **Nagata** discloses that a resistor (read as, resistor 49; figure 4) having its one end connected to an anode of this photodiode (note, the resistor 49 is connected to the photodiode 42 when the switch is closed; and the anode of diode 35 is indirectly connected to resistor 34).

As noted above, in figure 3 of **Nagata**, it is clearly shown that the anode of the photodiode 35 is connected to ground. As such, even if the photodiode 35 were to replace the photoelectric conversion element 42 in figure 4, the anode of the photodiode 35 would be connected to ground and the cathode of the photodiode 35 would be connected to one end of the resistor when the switch 48 is closed. In other words, it is respectfully submitted that the Examiner's position that the resistor 49 in figure 4 of **Nagata** has one of its ends connected to an anode of the photodiode, i.e., photoelectric conversion element 42 or photodiode 35, is simply not supported by **Nagata**.

Moreover, the Examiner's position that the anode of diode 35 is indirectly connected to resistor 34 also appears to be lacking since again it is submitted that as shown in figure 3, the anode of the diode 35 is clearly connected to ground, while the resistor 34 is connected between the power source 33d and the light emitter 32.

That is, clearly the **Nagata** reference fails to disclose a resistor directly connected to an anode of the photodiode 35 in figure 3 or assuming that the photoelectric conversion element 42 can be replaced by a photodiode, it is submitted that in figure 4 of **Nagata**, the photoelectric conversion element 42 would also not be directly connected to a resistor, since again the anode would be connected to ground and the resistor 49 does not have one of its ends connected to ground.

As such, it is respectfully submitted that the **Nagata** reference fails to disclose or fairly suggest the teachings as now set forth in claim 4 regarding *at least one photodiode for converting an optical signal to an electrical signal; a resistor having its one end directly connected to an anode of this photodiode.*

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

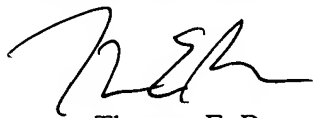
Application No.: 10/813,116  
Art Unit: 2613

Response  
Attorney Docket No.: 042164

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,  
**WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP**



Thomas E. Brown  
Attorney for Applicants  
Registration No. 44,450  
Telephone: (202) 822-1100  
Facsimile: (202) 822-1111

TEB/nrp